**ACTIVITY 2: Discovering area and perimeter**

**Grades:** 4–6

**Purpose:** To explore area and perimeter.

**Materials:** *Spaghetti and Meatballs for All!* by Marilyn Burns (Scholastic, 1997), square tiles

**Time Needed:** 30 minutes

1. Read the book *Spaghetti and Meatballs for All!* It's a topsy-turvy tale about Mr. and Mrs. Comfort, who are busily cooking a feast and arranging 8 tables and 32 chairs so that everyone will have a seat. As the guests arrive, however, and families ask to sit together, the Comforts rush around to rearrange the tables so they can accommodate everyone. After they've tried six different combinations, they go back to their original setup and the guests happily get their fill of spaghetti and meatballs.
2. Although Mrs. Comfort doesn't use mathematical terms to describe her seating plans, she's talking about area and perimeter. Have students use small square tiles or other manipulatives to construct different ways the Comforts could arrange eight tables to seat guests.
3. Go through the book again with the class, this time drawing or having students draw a picture of each new table arrangement. Figure out how many people could be seated at each. Use the words area and perimeter to talk about the size of each arrangement and the number of people it seats.
4. Have children use the tiles or drawings to investigate the following problems: Suppose there were going to be just 12 people at the family reunion. What different table arrangements are possible? Which arrangement would use the fewest tables? Which arrangement would use the most tables?
5. For additional challenges, try the same problem for 16, 24, 36, or any other number of people.

**\***This book and an expanded lesson based on it are included in the forthcoming *Marilyn Burns Math By All Means Unit, Area and Perimeter* by Cheryl Rectanus